

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/B2004/001068

International filing date (day/month/year)
02.04.2004

Priority date (day/month/year)
14.04.2003

International Patent Classification (IPC) or both national classification and IPC
G06F17/30

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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10/552829

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/IB2004/001068

JC20 Rec'd PCT/PTO 13 OCT 2005

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2004/001068

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-32
	No: Claims	
Inventive step (IS)	Yes: Claims	19-24,28
	No: Claims	1-18,25-27,29-32
Industrial applicability (IA)	Yes: Claims	1-32
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43*bis*.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43*bis*.1 and 70.9)

see form 210

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

PCT/IB2004/001068

Re Item V.

- 1 The following documents are referred to in this communication:
 - D1 : JASINSCHI R S ET AL: "Integrated multimedia processing for topic segmentation and classification", PROCEEDINGS INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, ICIP 2001, THESSALONIKI, GREECE, OCT. 7 - 10, 2001, INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 3. CONF. 8, 7 October 2001, pages 366-369, XP010563359, ISBN: 0-7803-6725-1
 - D2: WO 00/45291 A (KONINKL PHILIPS ELECTRONICS NV), 3 August 2000
 - D3 : DIMITROVA N ET AL: "Personalizing video recorders using multimedia processing and integration", PROCEEDINGS OF 9TH ACM INTERNATIONAL CONFERENCE ON MULTIMEDIA, OTTAWA, CA, 2001, pages 564-567, XP002287757
 - D4: US-A-5 805 733 (NORMILE JAMES ET AL), 8 September 1998
 - D5: NAPHADE M R ET AL: "AUDIO-VISUAL QUERY AND RETRIEVAL: A SYSTEM THAT USES DYNAMIC PROGRAMMING AND RELEVANCE FEEDBACK", JOURNAL OF ELECTRONIC IMAGING, SPIE + IS&T, US, vol. 10, no. 4, October 2001, pages 861-870, XP001104666, ISSN: 1017-9909
- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of **independent claims 1, 25 and 30** does not involve an inventive step in the sense of Article 33(3) PCT.
 - 2.1. Documents D1 is considered to represent the most relevant state of the art to the subject matter of claims 1, 25 and 30. D1 discloses (the references in parenthesis applying to this document):

A method/an apparatus for receiving and segmenting a multimedia stream into video segments with the help of a processing system called 'Video Scout' (abstract and introduction). The segmentation process evaluates a plurality of content features (section 4 and 5 on page 367).
 - 2.2 Although D1 concerns the storage of whole TV programs on users' profiles, the subject-matter of independent claims 1, 25 and 30 differs from the disclosure of D1 in that :

D1 does not explicitly mention that the segmentation may concern music videos and that at least one music video is identified.

- 2.3 The problem to be solved by the present invention may therefore be regarded as how to apply a known video segmentation process to a multimedia stream containing music videos.

It has to be noted that the claims 1, 25 and 30 do not specify any particular technical features which help the reader to understand how segmentation or identification of music videos in particular is performed. The examiner merely considered the feature to segment and to identify music videos as a result to be achieved.

- 2.4 In view of D2 the wanted segmentation and identification proposed in claims 1, 25 and 30 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

It appears to be obvious from D2 (p.14, lines 3-10; p.16, lines 21-25) that an indexing system of video clips uses content attributes in order to identify music videos from channels like MTV or VH-1.

- 2.5 Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claims 1, 25 and 30 thus cannot be considered inventive (Article 33(3) PCT).

- 3 **Dependent claims 2-18, 26-27, 29 and 31-33** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The cited prior art documents already describes the use of

- summary generation (D2, p.16, lines 24-25)
- storage and retrieval based on users' preferences (D1, p.366, right column, last paragraph; D1, p.368, 2nd paragraph; D3, p.565, section 2-2.3, figure 1 and 2)
- pattern recognition engine (Bayesian networks, neural networks) (D1, p.368, left column; D4, column 4, lines 55-57)

- video segmentation rules (D1, p. 368, section 6)
- face presence, low level features, keyframes, audio volume, MFCC, LPC, pitch (D1, p.367, right column, last two paragraphs)
- videotext presence (D1, p.367, left column, last 10 lines)
- colour histograms, motion (D5, sections 4.2 - 4.4)
- analysis of keywords (D1, p.368, right column, first paragraph)
- external databases for cross-checking the validity of title/artist names are well known in the art (e.g. free Internet database CDDb)
- analysis of keywords from transcripts (D1, p. 368, right column, 1st para)
- thresholds is implicit for basically all types of audio/video feature detections

As these features have already been employed for the same purpose in similar indexing/segmentation systems. It would be obvious to the person skilled in the art, to apply these features with corresponding effect to the method/apparatus according to D1.

- 4 The claimed invention is considered industrially applicable in the field of video segmentation systems in accordance with Art.33(4) PCT.

Re Item VI

Certain documents cited

Certain published documents

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
IB2003/002591	31 December 2003	10 June 2003	20 June 2002

This document discloses subject-matter being identical to at least the claimed subject-matter of claims 1, 2, 5, 7, 9, 18-25 and 30-32 (see citation given in the International Search Report).